

WHAT IS CLAIMED IS:

1. An estimator program that performs method steps for estimating parameters of the optimum operating Server Metafarm designed to serve a particular large number of clients L comprising the steps of:

5 (a) inputting a group of parameters involving at least one Server Metafarm parameter and at least one single server parameter;

10 (b) selecting at least one Server Metafarm optimization parameter and its domain which indicates the values that the Server Farm optimization parameter may assume;

(c) selecting a Server Metafarm optimization criterion that is a function of said Server Metafarm optimization parameter or parameters;

15 (d) using an optimization technique to find the optimum value (values) of the optimization parameter (parameters).

2. Th method of claim 1 wherein said step (a) of inputting said group of parameters includes the steps of:

(a1) selecting for input said particular number of clients "L" for utilizing said Server Metafarm;

(a2) selecting for input a maximum single server workload of users "P";

(a3) selecting for input a mean time to repair value (MTTR) for a single server;

(a4) selecting for input a mean time to failure (MTTF) for a single server.

3. The method of claim 1 wherein step (b) for selecting optimization parameters includes:

(b1) selecting a number of Server Farms that make up a Server Metafarm which is any natural integer number of servers wherein each Server Farm is the same size, in number of servers, as each other Server Farm.

4. The method of claim 1 wherein step (b) for selecting optimization parameters includes:

(b2) selecting a Redundancy Factor having a domain which is an interval between 0 and 100 percent.

5. The method of claim 1 wherein step (b) for selecting optimization parameters includes:

(b3) selecting a number of Server Farms of equal size that make up a Server Metafarm which number is any natural integer number of servers, and,

(b4) selecting a Redundancy Factor having a domain which is an interval between 0 and 100 percent.

6. The method of claim 1 wherein step (c) for selecting said optimization criteria includes:

(c1) selecting an optimization function which is the Server Metafarm Mean Time To Failure.

7. The method of claim 1 wherein step (c) for selecting said optimization criteria includes:

(c2) selecting an optimization function which is the Server Metafarm Availability.

8. The method of claim 1 wherein step (c) for selecting said optimization criteria includes:

(c3) selecting an optimization function which is the Redundancy Factor that should be minimized and, additionally, selecting a constraint in the form of the minimum required Server Metafarm Mean Time To Failure value.

9. The method of claim 1 wherein step (c) for selecting said optimization criteria includes:

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(c4) selecting an optimization function which is the Redundancy Factor that should be minimized and, additionally, selecting a constraint in the form of the minimum required Server Metafarm Availability value.

10. The method of claim 1 wherein step (d) for using said optimization procedure includes the steps of:

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(d1) selecting a value of said optimization parameters from said domain;
(d2) calculating a value for said optimization criterion;
(d3) making an evaluation decision about the end or the continuation of said optimization procedure.

11. The method of claim 10 wherein step (d3) involves the decision to stop the procedure if the optimum number of Server Farms in the configured Server Metafarm is determined.

12. The method of claim 10 wherein step (d3) includes the step of:

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(d3a) continuing the optimization procedure if the optimum number for each single Server Farm size is not yet determined, by repeating said step (d2) with another value of said optimization parameter (parameters) from said domain (domains).

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